Amendments to the Abstract:

In a network node, a method and apparatus <u>to assemble</u> ~~for assembling~~ fixed cell length cells resulting from the segmenting of variable length frames into cells. The hardware implementations of the preferred embodiments of the invention comprise a finite state machine which handles three processes at the same time, one for fetching the frame data stored in a storage unit, the data store, one for moving data from the frame data and control block data to the cell and one for outputting cell data. The other components are a counter for the pointing to the frame and a multiplexer for selecting the correct data to form the cell.

~~The simple finite state machine is able to repetitively build all the cells corresponding to a frame because a cell pattern always applies to these cells with only two constraints. The first is to have the cell size be 64 unit (4 column unit by 16 row unit where a unit can be a byte, bit or any multiplier of bits or bytes) with a 6 unit cell header and 10 unit frame header; the second is to have the insert and overlay field have to be even. This method and apparatus can be used whenever the frame are modified during the segmenting processing by replacing a field by a definite value or when a new field is inserted in the frame or even if frames are packed into one cell.~~

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